NOTES:

1. Proposed Sewer and Water Improvements on 15th Street NE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25". Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
2. Depress crown and tip gutter section to allow drainage to flow across intersection as indicated.
3. Proposed grades are to top of curb unless otherwise stated.
4. All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
5. Embankment quantities shown include an assumed 30% shrinkage factor.
6. Stationing for inlets refers to face of curb and center of inlet.
7. Backfill shall be Class B.
8. Engineer is to verify location of toe of slope and adjust pipe length accordingly.
9. Poured in place outfall structures to be considered incidental to other items.
10. Concrete cradles shall be constructed for storm sewer crossings with sewer or water utilities where there is less than 1 foot clearance between pipe.
11. Removal and replacement of topsoil in the I-94 right-of-way shall be considered incidential to the other bid items. Contractor shall restore I-94 right-of-way to its original condition or better as specified by North Dakota State Highway Department Standard Specifications.
12. Seeding in State Highway Right-of-Way shall be as specified in Section 890-Seed-North Dakota State Highway Standard Specifications.

HORIZONTAL SCALE 1"= 50'
VERTICAL SCALE : 1"= 5'
DATE: JULY, 1977

BEGIN QUANTITIES
STA 0+00

STORM SEWER QUANTITIES
STA 1+60

END QUANTITIES
STA 11+90.72

STORM SEWER QUANTITIES
STA 11+40

STORM SEWER INLETS

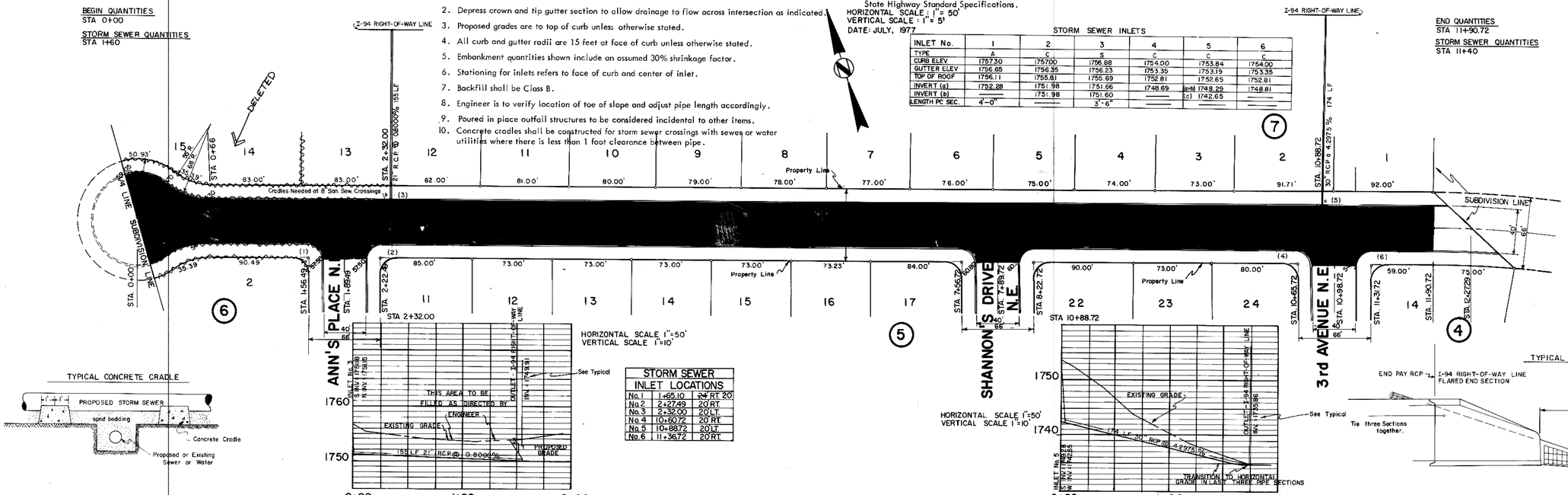
INLET No.	1	2	3	4	5	6
TYPE	A	C	S	C	C	C
CURB ELEV	1757.30	1757.00	1756.88	1754.00	1753.84	1754.00
GUTTER ELEV	1756.65	1756.35	1756.23	1753.35	1753.19	1753.35
TOP OF ROOF	1756.11	1755.81	1755.69	1752.81	1752.65	1752.81
INVERT (a)	1752.28	1751.98	1751.66	1748.69	(a-b) 1748.29	1748.81
INVERT (b)		1751.98	1751.60		(c) 1742.65	
LENGTH PC SEC.	4'-0"		3'-6"			

LEGEND

(EXISTING)
- 50' LT
- 50' RT

EXISTING
- WATERMAIN
- HYDRANTS
- GATE VALVES
- TEES
- PLUGS
- SANITARY SEWER
- SAN. SEWER MH

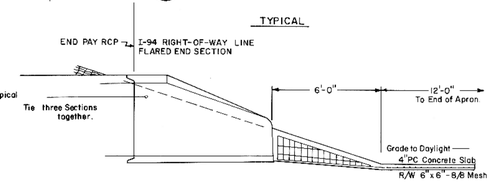
PROPOSED
- TYPE A INLET
- TYPE B INLET
- TYPE C INLET
- STORM SEWER
- STORM SEWER MH



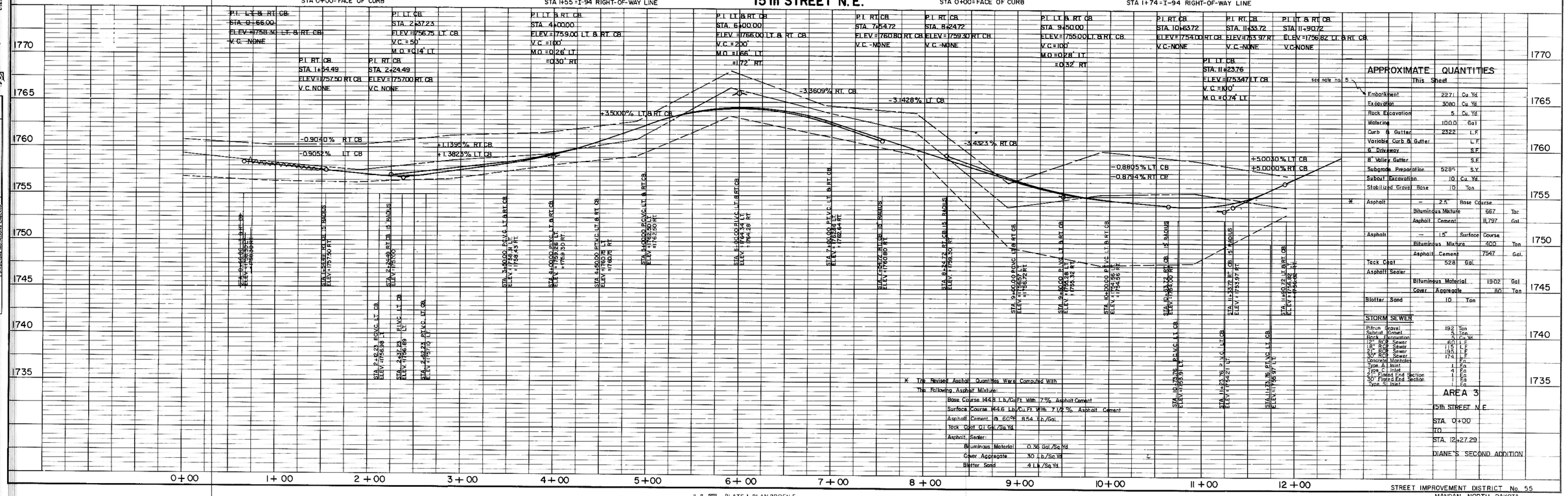
TYPICAL CONCRETE CRADLE

STORM SEWER INLET LOCATIONS		
No. 1	1+65.10	24 RT. 20
No. 2	2+27.49	20 RT.
No. 3	2+32.00	20 LT.
No. 4	10+60.72	20 RT.
No. 5	10+88.72	20 LT.
No. 6	11+36.72	20 RT.

TYPICAL



15th STREET N.E.



APPROXIMATE QUANTITIES

	This Sheet		
Embankment	2271	Cu Yd	
Excavation	3080	Cu Yd	
Rock Excavation	5	Cu. Yd	
Watering	1000	Gal	
Curb & Gutter	2322	L.F.	
Variable Curb & Gutter		L.F.	
6" Driveway		S.F.	
8" Valley Gutter		S.F.	
Subgrade Preparation	5285	S.Y.	
Subcut Excavation	10	Cu. Yd.	
Stabilized Gravel Base	10	Ton	
* Asphalt — 2.5" Base Course			
Bituminous Mixture	667	Tac	
Asphalt Cement	11,797	Gal	
Asphalt — 1.5" Surface Course			
Bituminous Mixture	400	Ton	
Asphalt Cement	7547	Gal.	
Tack Coat	528	Gal.	
Asphalt Sealer			
Bituminous Material	1902	Gal	
Cover Aggregate	80	Ton	
Blotter Sand	10	Ton	

see note no. 5

STORM SEWER

Pitrun Gravel	192	Ton
Subcut Cmmt	5	Ton
Rock Excavation	5	Cu Yd
15" RCP Sewer	80	L.F.
18" RCP Sewer	115	L.F.
21" RCP Sewer	195	L.F.
30" RCP Sewer	174	L.F.
Concrete Manholes		Ea.
Type A Inlet	1	Ea.
Type C Inlet	4	Ea.
21" Flared End Section	1	Ea.
30" Flared End Section	1	Ea.
Type S Inlet	1	Ea.

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:

- Base Course 144.8 Lb./Cu.Ft. With 7% Asphalt Cement
- Surface Course 144.6 Lb./Cu.Ft. With 7 1/2 % Asphalt Cement
- Asphalt Cement @ 60°F 8.54 Lb./Gal.
- Tack Coat 0.1 Gal./Sq.Yd.
- Asphalt Sealer:
  - Bituminous Material 0.36 Gal./Sq.Yd.
  - Cover Aggregate 30 Lb./Sq.Yd.
  - Blotter Sand 4 Lb./Sq.Yd.

AREA 3
15th STREET N.E.
STA. 0+00
TO
STA. 12+27.29
DIANE'S SECOND ADDITION

K&E PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

STREET IMPROVEMENT DISTRICT No. 55
MANDAN, NORTH DAKOTA

SHEET No. 3-1
DATE REVISED — MARCH, 1978

PLAN / PROFILE
SURVEYED
PLOTTED
NOTE BOOK
No.
BY
DATE
CHECKED
R/W HWY CHECKED
STRUCTURE NOTATIONS CHECKED